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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,359	07/25/2003	Angel Stoyanov	25296	2458

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EXAMINER	
CORDRAY, DENNIS R	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,359	STOYANOV ET AL.	
	Examiner	Art Unit	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/20/04

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This is a first action on the merits of Application SN 10/627,359.

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract of the disclosure is objected to because it contains insufficient description of the invention per the guidelines above. Correction is required. See MPEP § 608.01(b).

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: METHOD FOR PREPARING GLYOXAL CROSSLINKED CELLULOSIC FIBERS.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Information critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). While it appears that the method described in the instant specification uses no catalyst, the language used in the method claim does not does not distinctly claim that the process is catalyst free, and does not exclude additional steps, such as introduction of a catalyst outside of the aqueous crosslinking agent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al (4822453) in view of Hatsuda et al (6562879).

Claims 1-5 and 8:

Dean teaches a process for making individualized crosslinked fibers that includes the following steps:

- Contacting the fibers with a liquid medium containing a C2 to C8 dialdehyde, and particularly glyoxal (about 0.18 to about 1.3 wt% reacted with the fibers, based on the weight of the fibers) as a crosslinking agent (col 4, lines 62-63; col 5, lines 11-13, 26-34).
- Mechanical defibration into individual treated fibers (col 6, lines 1-4).
- Heating to obtain crosslinking (120 – 160 F for 30-60 min or at temperatures up to 160 C for shorter times) (col 9, lines 13-21).

Dean teaches that generally a catalyst is used in the reaction, but does not specifically require a catalyst. Dean teaches in one embodiment that a catalyst can be added in a separate step from those above (i.e.-the glyoxal solution does not contain a catalyst) (col 7, lines 49-52). Furthermore, Dean also teaches that the fibers may be supplied in sheeted form (col 10, lines 10-12). Dean discloses an amount of crosslinking agent applied that overlaps the amount specified in the instant invention.

Dean does not teach that the crosslinked fibers have an L value greater than about 92 or about 95.

Hatsuda discloses a structure containing a water-absorbent crosslinked polymer resin powder with color scale values "L" (lightness scale), "a" (red-green scale) and "b" (yellow-blue scale) as reproduced below (col 16, lines 6-12).

> The arbitrarily pulverized water-absorbent resin powder, according to the present invention, further has an L value of preferably not lower than 85

in lightness (lightness index), and an a value preferably in the range of +-2 and a b value preferably in the range of 0~9 both in chromaticity (chromaticness index), as measured with a device such as a spectroscopic color difference meter.

Hatsuda teaches that color out of the specified range is not favorable to customers (col 16, lines 13-19).

The art of Dean and Hatsuda and the claimed invention are analogous because they are from the same science of providing crosslinked polymers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to obtain the criterion for "L" in the process of Dean in view of Hatsuda to make the crosslinked fibers aesthetically favorable to customers.

Claims 6-7:

Dean does not teach a specification of the color parameters "a" and "b". However, color is a well recognized component of customer appeal, as taught by Hatsuda.

Hatsuda, as indicated above, specifies a range for the color parameters "a" (-2 to 2) and "b" (0~9) that would make the crosslinked product favorable to customers. These disclosed "a" and "b" values encompass the instantly claimed values.

It would have been obvious at the time the invention was made to a person with ordinary skill in the art to obtain the claimed color criteria "a" and "b" in the process of Dean in view of Hatsuda's disclosed values to make the crosslinked fibers favorable to customers.

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean in view of Hatsuda as applied to claim 1 above, and further in view of Cook et al (5562740).

Dean and Hatsuda do not teach a brightness of about 80 or 85% ISO.

Cook teaches the need for high fiber brightness in crosslinked cellulosic fibers for asthetic appeal and gives examples of products having a brightness value of 82 to 84% ISO (col 3, lines 10-11; col 23, line 18; col 24, lines 3 and 56).

It would have been obvious at the time the invention was made to a person with ordinary skill in the art to obtain the claimed brightness criterion in the process of Dean/Hatsuda in view of Cooks disclosed values to make the crosslinked fibers appealing to customers.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (Graef (4853086), Bernardin (3224926), Herron et al (5190563)). They disclose other processes for the manufacture of crosslinked cellulose products.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRC

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SUPERVISORY PATENT EXAMINER
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